* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page for STN Seminar Schedule - N. America
NEWS 2	JUN 06	EPFULL enhanced with 260,000 English abstracts
NEWS 3	JUN 06	KOREAPAT updated with 41,000 documents
NEWS 4	JUN 13	USPATFULL and USPAT2 updated with 11-character patent numbers for U.S. applications
NEWS 5	JUN 19	CAS REGISTRY includes selected substances from web-based collections
NEWS 6	JUN 25	CA/CAplus and USPAT databases updated with IPC reclassification data
NEWS 7	JUN 30	AEROSPACE enhanced with more than 1 million U.S. patent records
NEWS 8	JUN 30	EMBASE, EMBAL, and LEMBASE updated with additional options to display authors and affiliated organizations
NEWS 9	JUN 30	STN on the Web enhanced with new STN AnaVist Assistant and BLAST plug-in
NEWS 10	JUN 30	STN AnaVist enhanced with database content from EPFULL
NEWS 11	JUL 28	CA/CAplus patent coverage enhanced
NEWS 12	JUL 28	EPFULL enhanced with additional legal status information from the epoline Register
NEWS 13	JUL 28	IFICDB, IFIPAT, and IFIUDB reloaded with enhancements
NEWS 14	JUL 28	STN Viewer performance improved
NEWS 15	AUG 01	INPADOCDB and INPAFAMDB coverage enhanced
NEWS 16	AUG 13	CA/CAplus enhanced with printed Chemical Abstracts page images from 1967-1998
NEWS 17	AUG 15	CAOLD to be discontinued on December 31, 2008
NEWS 18	AUG 15	CAplus currency for Korean patents enhanced
NEWS 19	AUG 27	CAS definition of basic patents expanded to ensure comprehensive access to substance and sequence information
NEWS 20	SEP 18	Support for STN Express, Versions 6.01 and earlier, to be discontinued
NEWS 21	SEP 25	CA/CAplus current-awareness alert options enhanced to accommodate supplemental CAS indexing of exemplified prophetic substances
NEWS 22	SEP 26	WPIDS, WPINDEX, and WPIX coverage of Chinese and and Korean patents enhanced
NEWS 23	SEP 29	IFICLS enhanced with new super search field
NEWS 24	SEP 29	EMBASE and EMBAL enhanced with new search and display fields
NEWS 25	SEP 30	CAS patent coverage enhanced to include exemplified prophetic substances identified in new Japanese-language patents
NEWS 26	OCT 07	EPFULL enhanced with full implementation of EPC2000
NEWS 27	OCT 07	Multiple databases enhanced for more flexible patent number searching

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 12:18:15 ON 17 OCT 2008

=> file caplus
COST IN U.S. DOLLARS   SINCE FILE   TOTAL
                                                             ENTRY   SESSION
FULL ESTIMATED COST   0.21   0.21

FILE 'CAPLUS' ENTERED AT 12:19:01 ON 17 OCT 2008
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FILE COVERS 1907 - 17 Oct 2008 VOL 149 ISS 17
FILE LAST UPDATED: 16 Oct 2008 (20081016/ED)

Caplus now includes complete International Patent Classification (IPC)
reclassification data for the second quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/legal/infopolicy.html

=> Echovirus
           758 ECHOVIRUS
           113 ECHOVIRUSES
L1   806 ECHOVIRUS
                 (ECHOVIRUS OR ECHOVIRUSES)

=> cancer (l) treatment
        378671 CANCER
         55697 CANCERS
        392621 CANCER
                 (CANCER OR CANCERS)
       2502432 TREATMENT
        235050 TREATMENTS
       2625771 TREATMENT
                 (TREATMENT OR TREATMENTS)
L2   101258 CANCER (L) TREATMENT

=> L1 and L2
L3   18 L1 AND L2

=> RGD

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          6029 RGD
           918 RGDS
L4        6643 RGD
                (RGD OR RGDS)

=> integrin
         27224 INTEGRIN
         36440 INTEGRINS
L5       42765 INTEGRIN
                (INTEGRIN OR INTEGRINS)

=> L4 and L5
L6        3469 L4 AND L5

=> L1 and L4
L7          20 L1 AND L4

=> D L3 IBIB ABS 1-18

L3   ANSWER 1 OF 18  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        2008:529353  CAPLUS
DOCUMENT NUMBER:         148:493801
TITLE:                   Attenuated organ- or tissue-specific microbial
                         pathogen and antiinflammatory agent for targeted
                         antigenic activation of the immune response to treat
                         cancers
INVENTOR(S):             Gunn, Harold David
PATENT ASSIGNEE(S):      Can.
SOURCE:                  PCT Int. Appl., 151pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  2
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
     WO 2008049231        A1    20080502    WO 2007-CA1915         20071025
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
             CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI,
             GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,
             KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
             MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
             PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,
             TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
             GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
             BY, KG, KZ, MD, RU, TJ, TM
     US 20070104733       A1    20070510    US 2006-553972         20061027
     CA 2571805           A1    20080427    CA 2006-2571805        20061220
PRIORITY APPLN. INFO.:                      US 2006-553972      A  20061027
                                            CA 2006-2571805     A  20061220
                                            US 2004-577206P     P  20040607
                                            WO 2005-CA812       A2 20050530
AB   The invention provides in part methods of treating cancers of a
     specific organ or tissue by administering a composition that is antigenically
     specific for one or more microbes that are pathogenic in the specific
     organ or tissue in which the cancer is situated.  The
     formulations of the invention thereby facilitate activation of a
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treatment response to a cancer in a particular tissue or organ. The compns. may for example include killed or attenuated microbial pathogens, and may be administered at sites distant from the cancer, for example the skin. In some embodiments, microbial species of endogenous flora that are known to cause infection in the relevant organ or tissue may be used in the formulation of the antigenic compns. In alternative embodiments, exogenous microbial pathogens that are known to cause infection in the relevant organ or tissue may be used in the formulation of the antigenic compns. The administration of the immunogenic compns. may be repeated relatively frequently over a relatively long period of time. In embodiments for intradermal or s.c. injection, dosages may be adjusted so that injections reproduce a consistent visible delayed inflammatory immune reaction at the successive site or sites of administration.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

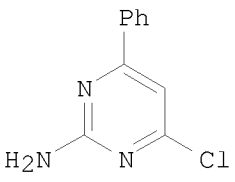
L3 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:996989 CAPLUS
DOCUMENT NUMBER: 147:323005
TITLE: Preparation of 2-amino-4-phenylpyrimidines as HSP90 modulators
INVENTOR(S): Buchstaller, Hans-Peter; Eggenweiler, Hans-Michael; Wolf, Michael; Sirrenberg, Christian
PATENT ASSIGNEE(S): Merck Patent GmbH, Germany
SOURCE: Ger. Offen., 38pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 102006008880	A1	20070906	DE 2006-102006008880	20060227
WO 2007098835	A1	20070907	WO 2007-EP708	20070126

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: DE 2006-102006008880A 20060227
GI



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AB 27-Examples of 2-amino-4-phenylpyrimidines and their pharmaceutically acceptable salts were claimed. For example, Pd(II) mediated coupling of phenylboronic acid and 2-amino-4,6-dichloropyrimidine afforded claimed phenylpyrimidine I. In HSP90 binding assays, 8-examples of of the claimed compds. exhibited IC50 values ranging from 1-10 μM.

L3 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:1206893 CAPLUS
DOCUMENT NUMBER: 145:504059
TITLE: Treating cancer and infectious diseases using human monoclonal antibodies to PD-1 (programmed death 1) alone or in combination with other immunotherapeutics
INVENTOR(S): Korman, Alan J.; Srinivasan, Mohan; Wang, Changyu; Selby, Mark J.; Chen, Bing; Cardarelli, Josephine M.
PATENT ASSIGNEE(S): Ono Pharmaceutical Co., Ltd., Japan; Medarex, Inc.
SOURCE: PCT Int. Appl., 199pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006121168	A1	20061116	WO 2006-JP309606	20060502
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2006244885	A1	20061116	AU 2006-244885	20060502
CA 2607147	A1	20061116	CA 2006-2607147	20060502
JP 2006340714	A	20061221	JP 2006-128058	20060502
EP 1896582	A1	20080312	EP 2006-746353	20060502
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
NO 2007005697	A	20080211	NO 2007-5697	20071107
MX 200713978	A	20080222	MX 2007-13978	20071108
IN 2007CN05057	A	20080530	IN 2007-CN5057	20071109
KR 2008011428	A	20080204	KR 2007-728376	20071205
CN 101213297	A	20080702	CN 2006-80023860	20071228

PRIORITY APPLN. INFO.:	US 2005-679466P	P	20050509
	US 2005-738434P	P	20051121
	US 2005-748919P	P	20051208
	WO 2006-JP309606	W	20060502
	WO 2006-JP9606	W	20060502

AB The present invention provides isolated monoclonal antibodies, particularly human monoclonal antibodies, that specifically bind to PD-1 (programmed death 1; PDCD1) with high affinity. Nucleic acid mols. encoding the antibodies of the invention, expression vectors, host cells and methods for expressing the antibodies of the invention are also provided. Immunoconjugates, bispecific mols. and pharmaceutical compns. comprising the antibodies of the invention are also provided. The

invention also provides methods for detecting PD-1, as well as methods for treating various diseases, including cancer and infectious diseases, using anti-PD-1 antibodies. The present invention further provides methods for using a combination immunotherapy, such as the combination of anti-CTLA-4 and anti-PD-1 antibodies, to treat hyperproliferative disease, such as cancer. The invention also provides methods for altering adverse events related to treatment with such antibodies individually.

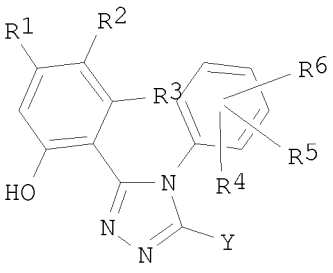
REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:849709 CAPLUS
DOCUMENT NUMBER: 145:271787
TITLE: Preparation of o-(s-triazol-3-yl)phenols as HSP90 inhibitors
INVENTOR(S): Eggenweiler, Hans-Michael; Wolf, Michael
PATENT ASSIGNEE(S): Merck Patent GmbH, Germany
SOURCE: PCT Int. Appl., 115pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006087077	A2	20060824	WO 2006-EP631	20060125
WO 2006087077	A3	20061102		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
DE 102005007304	A1	20060824	DE 2005-102005007304	20050217
AU 2006215902	A1	20060824	AU 2006-215902	20060125
CA 2598017	A1	20060824	CA 2006-2598017	20060125
EP 1853570	A2	20071114	EP 2006-704268	20060125
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
JP 2008530149	T	20080807	JP 2007-555478	20060125
MX 200709777	A	20070821	MX 2007-9777	20070813
KR 2007106720	A	20071105	KR 2007-718671	20070814
CN 101119978	A	20080206	CN 2006-80005110	20070816
US 20080182857	A1	20080731	US 2007-816465	20070816
IN 2007KN03421	A	20080321	IN 2007-KN3421	20070913
PRIORITY APPLN. INFO.:			DE 2005-102005007304A	20050217
			WO 2006-EP631 W	20060125

OTHER SOURCE(S): MARPAT 145:271787
GI



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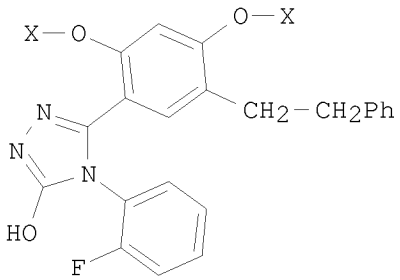

II

AB Title compds. I [R1 = OH, OCH3, OCF3, etc.; R2, R3 = H, halo, CN, etc.; R4, R5, R6 = H, halo, CN, etc.; Y = OH, SH] and their pharmaceutically acceptable salts and formulations were prepared For example, BBr3-mediated deprotection of Me ether II [X = CH3] afforded claimed triazolylphenol II [X = H]. In heat shock protein (HSP 90) inhibition assays, 10 examples of compds. I exhibited IC50 values ranging 0.8-5.2 x 10-7 mol/L.

L3 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:1262175 CAPLUS
DOCUMENT NUMBER: 144:588
TITLE: Cancer treatment using viruses and camptothecins
INVENTOR(S): Lorence, Robert M.; Roberts, Michael S.
PATENT ASSIGNEE(S): Wellstat Biologics Corporation, USA
SOURCE: PCT Int. Appl., 14 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005113018	A2	20051201	WO 2005-US14144	20050426
WO 2005113018	A3	20060302		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2005244768	A1	20051201	AU 2005-244768	20050426
CA 2562904	A1	20051201	CA 2005-2562904	20050426
EP 1744780	A2	20070124	EP 2005-779961	20050426
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 1946421	A	20070411	CN 2005-80013039	20050426
JP 2007534761	T	20071129	JP 2007-510862	20050426
MX 2006PA12145	A	20070131	MX 2006-PA12145	20061020
US 20070207149	A1	20070906	US 2006-568228	20061024
KR 2007008710	A	20070117	KR 2006-724721	20061124

PRIORITY APPLN. INFO.: US 2004-565631P P 20040427
WO 2005-US14144 W 20050426

AB Mammalian subjects having a neoplasm are treated with a virus and a camptothecin compound, for example irinotecan or topotecan. The virus is selected from the group consisting of a Newcastle disease virus, a measles virus, a vesicular stomatitis virus, an influenza virus, a Sindbis virus, a picornavirus, and a myxoma virus. The treatment can also include administration of a monoclonal antibody against epidermal growth factor receptor, for example cetuximab.

L3 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:349017 CAPLUS
DOCUMENT NUMBER: 142:404222
TITLE: Methods of treating disease through the administration of a manzamine analog or derivative
INVENTOR(S): Hamann, Mark T.; Rao, Karumanchi Venkateswara; Peng, Jiangnan
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 21 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050085554	A1	20050421	US 2004-878702	20040628
WO 2005084157	A2	20050915	WO 2004-US20742	20040628
WO 2005084157	A3	20060413		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-483380P P 20030626
OTHER SOURCE(S): CASREACT 142:404222; MARPAT 142:404222

AB A method of treating cancer, inflammatory disease or an infectious disease or condition in a subject in need of such treatment is disclosed. The method comprises administering to a subject an effective amount of a manzamine, or a rationally modified manzamine derivative or analog or an optical isomer or racemate or tautomer thereof or a pharmaceutically acceptable salt or prodrug thereof generated through optimized fermentation of a Micromonospora, extraction from sponges and then modified through semisynthesis. Papuamine was purified from the sponge Haliclona and also prepared Papuamine showed antimicrobial activity against Candida albicans, Cryptococcus neoformans, Staphylococcus aureus, Mycobacterium intracellulare, Aspergillus fumigatus, Plamodium falciparum, and M. tuberculosis.

L3 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:533959 CAPLUS
DOCUMENT NUMBER: 141:82319
TITLE: Hydrophilic polymer conjugates with integrin peptides

for prevention of cell-cell and cell-extracellular matrix interactions and their therapeutic use
INVENTOR(S): Massia, Stephen P.; Ehteshami, Gholam Reza
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 97 pp., Cont.-in-part of U.S. Ser. No. 295,734.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040127416	A1	20040701	US 2003-716293	20031117
PRIORITY APPLN. INFO.:			US 2002-295734 A2	20021115

AB The invention claims therapeutic bioconjugates composed of hydrophilic polymers covalently bound to peptides capable of binding specifically to a ligand expressed on a cell surface. Integrin peptide-polymer bioconjugates of the invention prevent cell-cell and cell-extracellular matrix interactions. These conjugates may be used in treatment of inflammation, autoimmune diseases, cancer, etc. Thus, adhesion of human monocytes to tumor necrosis factor α-stimulated, ICAM-expressing bovine endothelial cells was blocked by a a peptide-dextran conjugate. The peptide was derived from integrin αmβ2 and binds to ICAM-1.

L3 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:531385 CAPLUS
DOCUMENT NUMBER: 141:65085
TITLE: A method of treating a malignancy in a subject via direct picornaviral-mediated oncolysis
INVENTOR(S): Shafren, Darren
PATENT ASSIGNEE(S): The University of Newcastle Research Associates Limited, Australia
SOURCE: PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004054613	A1	20040701	WO 2003-AU1688	20031218
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2510227	A1	20040701	CA 2003-2510227	20031218
AU 2003287773	A1	20040709	AU 2003-287773	20031218
EP 1581257	A1	20051005	EP 2003-779569	20031218
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1784242	A	20060607	CN 2003-80109808	20031218

US 20060134778	A1	20060622	US 2003-539219	20031218
JP 2006517189	T	20060720	JP 2004-559490	20031218
ZA 2005005389	A	20060927	ZA 2005-5389	20031218
NZ 541230	A	20080430	NZ 2003-541230	20031218
IN 2005DN02950	A	20070112	IN 2005-DN2950	20050701
IN 2008DN00681	A	20080425	IN 2008-DN681	20080124

PRIORITY APPLN. INFO.: AU 2002-953436 A 20021218
WO 2003-AU1688 W 20031218
IN 2005-DN2950 A3 20050701

AB The invention discloses methods for treatment of abnormal cells such as cancer cells in a mammal. The methods involve treating the mammal with virus selected from echoviruses and modified forms and combination thereof, which recognize integrin α2β1 for infectivity of the cells. The invention also provided methods for screening cells to ascertain whether they are susceptible to treatment with viruses for use in a method of the invention as well as pharmaceutical compns. for use in the methods.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:515685 CAPLUS
DOCUMENT NUMBER: 141:70239
TITLE: In vitro immunization
INVENTOR(S): Hart, Derek Nigel John; Turtle, Cameron John
PATENT ASSIGNEE(S): The Corporation of the Trustees of the Order of the Sisters of Mercy In Queensland, Australia
SOURCE: PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004053113	A1	20040624	WO 2003-AU1647	20031209

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003285994	A1	20040630	AU 2003-285994	20031209

PRIORITY APPLN. INFO.: AU 2002-953238 A 20021209
WO 2003-AU1647 W 20031209

AB The present invention relates generally to a method of generating lymphocytes specific for particular antigens. More particularly, the present invention provides a method for generating antigen-reactive T-cells and even more particularly cytotoxic (CD8+) T-cells in vitro specific for antigens such as peptide antigens. The method of the present invention enables in vitro T-cell priming for particular antigens such as antigens on cancer cells, pathogenic cells, viruses or cells infected with viruses. The present invention is useful in identifying particularly immunogenic antigens for immunotherapy. The present invention further provides a method for the treatment or prophylaxis of a disease or condition in a subject by generating T-cells

reactive to an antigenic mol. and administering an effective amount of antigen-reactive T-cells to the subject or other compatible host. The present invention permits the generation of dendritic cell/T-cell populations for use in cellular immunotherapy.

L3 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:100511 CAPLUS
DOCUMENT NUMBER: 140:144695
TITLE: Using heat shock proteins and alpha-2-macroglobulins to increase the immune response to vaccines comprising heat shock protein-peptide complexes or alpha-2-macroglobulin-peptide complexes
INVENTOR(S): Srivastava, Pramod K.
PATENT ASSIGNEE(S): University of Connecticut Health Center, USA
SOURCE: U.S. Pat. Appl. Publ., 26 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 20040022796	A1	20040205	US 2003-427857		20030501
CA 2483925	A1	20040429	CA 2003-2483925		20030501
WO 2004035602	A2	20040429	WO 2003-US14390		20030501
WO 2004035602	A3	20050414			
W: AU, CA, CN, IL, IN, JP, KP, KR, NO, RU, SG					
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR					
AU 2003301296	A1	20040504	AU 2003-301296		20030501
EP 1539223	A2	20050615	EP 2003-808362		20030501
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK					
JP 2006507272	T	20060302	JP 2004-545198		20030501
PRIORITY APPLN. INFO.:			US 2002-377484P	P	20020502
			WO 2003-US14390	W	20030501

AB The disclosed invention provides a method of improving or prolonging a subject's immune response to a vaccine composition comprising heat shock protein (HSP)-peptide complexes or α2-macroglobulin (α2M)-peptide complexes (hereinafter "HSP/α2M vaccine composition"). The HSP-peptide complexes or α2M-peptide complexes of the vaccine composition comprise HSP(s) or α2M complexed to a component against which an immune response is desired to be induced. In particular the invention is directed to methods of improving or prolonging a subject's immune response comprising administering an HSP/α2M vaccine composition in conjunction with a preparation comprising HSP or α2M, alone or complexed to a peptide that is not the component against which an immune response is desired to be induced (hereinafter "HSP/α2M preparation"), i.e., the HSP/α2M preparation does not display the immunogenicity of the component. In particular, HSP/α2M vaccine compns. are administered in conjunction with HSP/α2M preparation to improve or prolong the immune response of a subject against infection or cancer.

L3 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:892568 CAPLUS
DOCUMENT NUMBER: 139:358762
TITLE: Use of heat shock proteins to enhance efficacy of antibody therapeutics
INVENTOR(S): Srivastava, Pramod K.

PATENT ASSIGNEE(S): University of Connecticut Health Center, USA
SOURCE: PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003092624	A2	20031113	WO 2003-US13967	20030502
WO 2003092624	A3	20040325		
W: AU, CA, CN, IL, IN, JP, KP, KR, NO, RU, SG, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
CA 2485098	A1	20031113	CA 2003-2485098	20030502
AU 2003234469	A1	20031117	AU 2003-234469	20030502
EP 1503795	A2	20050209	EP 2003-728696	20030502
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
CN 1665533	A	20050907	CN 2003-815669	20030502
JP 2005533015	T	20051104	JP 2004-500809	20030502
IN 2004CN02683	A	20060210	IN 2004-CN2683	20041129
US 20060093612	A1	20060504	US 2005-513204	20051117
IN 2007CN05148	A	20080627	IN 2007-CN5148	20071114

PRIORITY APPLN. INFO.:			
US 2002-377483P	P	20020502	
WO 2003-US13967	W	20030502	
IN 2004-CN2683	A3	20041129	

AB The present invention relates to methods and pharmaceutical compns. useful for the prevention and treatment of any disease wherein the treatment of such disease would be improved by an enhanced immune response, such as infectious diseases, primary and metastatic neoplastic diseases (i.e., cancer), or neurodegenerative or amyloid diseases. In particular, the contemplated invention is directed to methods comprising the administration of heat shock/stress proteins (HSPs) or HSP complexes alone or in combination with each other, in combination with the administration of an immunoreactive reagent. The invention also provides pharmaceutical compns. comprising one or more HSPs or HSP complexes in combination with an immunoreactive reagent. Addnl., the invention contemplates the use of the methods and compns. of the invention to enhance or improve passive immunotherapy and effector cell function.

L3 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:889386 CAPLUS
DOCUMENT NUMBER: 137:351504
TITLE: Using heat shock proteins or α2-macroglobulin to increase immune response to vaccines
INVENTOR(S): Srivastava, Pramod K.
PATENT ASSIGNEE(S): University of Connecticut Health Center, USA
SOURCE: U.S. Pat. Appl. Publ., 45 pp., Cont.-in-part of U.S. Ser. No. 693,643.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20020172682	A1	20021121	US 2002-131937	20020425
US 7132109	B1	20061107	US 2000-693643	20001020

WO 2003090687	A2	20031106	WO 2003-US12803		20030425
WO 2003090687	A3	20050127			
WO 2003090687	A9	20050324			
W: AU, CA, JP					
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR					
AU 2003228687	A1	20031110	AU 2003-228687		20030425
EP 1526863	A2	20050504	EP 2003-726451		20030425
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK					
JP 2005529124	T	20050929	JP 2003-587326		20030425
US 20060078563	A1	20060413	US 2005-283102		20051118
PRIORITY APPLN. INFO.:			US 2000-693643	A2	20001020
			US 2002-131937	A	20020425
			WO 2003-US12803	W	20030425

AB The present invention provides for a method of using heat shock proteins (HSPs) to amplify the immune response initiated by a vaccine. HSPs can be introduced into a subject before, concurrently, or after the administration of a vaccine. The HSPs can also be used to activate antigen presenting cells which are then introduced into a subject in conjunction with a vaccine. The HSPs used in the methods of the invention can be unbound or can be covalently or noncovalently bound to a peptide that is unrelated to the vaccine. The subject is preferably mammalian, and most preferably human. It is shown by way of example herein that HSPs induces secretion of cytokines and surface expression of antigen-presenting and co-stimulatory mols. The invention also encompasses methods of treatment and prevention of cancer and infectious diseases in a subject. The invention also discusses the administration of α2-macroglobulin in conjunction with a vaccine to enhance the immune response of a subject.

L3 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:331983 CAPLUS
DOCUMENT NUMBER: 136:335223
TITLE: Using heat shock proteins to increase immune response
INVENTOR(S): Srivastava, Pramod K.
PATENT ASSIGNEE(S): University of Connecticut Health Center, USA
SOURCE: PCT Int. Appl., 80 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2002034205	A2	20020502	WO 2001-US46332		20011019
WO 2002034205	A3	20020718			
W: AU, CA, JP					
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR					
US 7132109	B1	20061107	US 2000-693643		20001020
CA 2425770	A1	20020502	CA 2001-2425770		20011019
AU 2002018018	A	20020506	AU 2002-18018		20011019
EP 1333861	A2	20030813	EP 2001-988572		20011019
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR					
JP 2004512288	T	20040422	JP 2002-537259		20011019
US 20060078563	A1	20060413	US 2005-283102		20051118
PRIORITY APPLN. INFO.:			US 2000-693643	A	20001020
			WO 2001-US46332	W	20011019

AB The invention discloses using heat shock proteins (HSPs) to amplify the immune response initiated by a vaccine. HSPs can be introduced into a subject before, concurrently, or after the administration of a vaccine. The HSPs can also be used to activate antigen presenting cells which are then introduced into a subject in conjunction with a vaccine. The HSPs used in the methods of the invention can be unbound or can be covalently or non-covalently bound to a peptide that is unrelated to the vaccine. The subject is preferably mammalian, and most preferably human. It is shown by way of example herein that HSPs induces secretion of cytokines and surface expression of antigen-presenting and co-stimulatory mols. The invention also encompasses methods of treatment and prevention of cancer and infectious diseases.

L3 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:738879 CAPLUS
DOCUMENT NUMBER: 133:301197
TITLE: Oxalic acid or oxalate compositions and methods for bacterial, viral, and other diseases or conditions
INVENTOR(S): Hart, Francis J.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 50 pp., Cont.-in-part of U. S. Ser. No. 629,538.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6133318	A	20001017	US 1998-14943	19980128
US 6133317	A	20001017	US 1996-629538	19960409
US 6407141	B1	20020618	US 2000-535572	20000327
PRIORITY APPLN. INFO.:			US 1995-6785P P	19951115
			US 1996-629538 A2	19960409
			US 1997-36983P P	19970129
			US 1998-14943 A2	19980128

AB A single medicine oxalic acid or oxalate or "magic bullet" and method for treatment or prevention of infectious or pathogenic microbial, bacterial, viral and other diseases in warm-blooded animals, including humans and pets, is provided. A composition includes at least one therapeutically effective form of oxalic acid or oxalate selected from ester, lactone or salt form including sodium oxalate, oxalic acid dihydrate, anhydrous oxalic acid, oxamide, and oxalate salts, natural or processed foods including molds, plants or vegetables containing oxalic acid or oxalate, beverages, liqs. or juices containing oxalic acid or oxalate, additives containing oxalic acid or oxalate, and combinations thereof. The composition may also contain a pharmaceutically acceptable carrier or diluent for the therapeutically effective form of oxalic acid or oxalate. Methods are provided including the steps of periodically administering, by topical, oral, or parenteral application, a therapeutically effective dosage of a composition including at least one therapeutically effective form of oxalic acid or oxalate and improving chemotherapy reducing the intake of oxalic acid or oxalate blockers such as citric acid, ascorbic acid (vitamin C), pyridoxine hydrochloride (vitamin B6), calcium, alc., resins, clays, foods containing calcium, beverages containing alc., citric acid, or ascorbic acid, red meat or white meat of fowl containing pyridoxine hydrochloride, or other foods nutritional supplements or beverages containing oxalic acid or oxalate blockers.
REFERENCE COUNT: 103 THERE ARE 103 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:608612 CAPLUS
DOCUMENT NUMBER: 133:206756
TITLE: Compositions and methods using complexes of calreticulin and antigenic molecules
INVENTOR(S): Gilboa, Eli; Nair, Smita K.; Nicchitta, Christopher V.
PATENT ASSIGNEE(S): Duke University, USA
SOURCE: PCT Int. Appl., 82 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050080	A1	20000831	WO 2000-US4565	20000223
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 20020058609	A1	20020516	US 1999-261473	19990226
AU 2000032414	A	20000914	AU 2000-32414	20000223
PRIORITY APPLN. INFO.:			US 1999-261473 A	19990226
			WO 2000-US4565 W	20000223

AB A method of eliciting an immune response in a vertebrate subject. The method includes the administration to a vertebrate subject of a composition including an amount of a purified complex including calreticulin bound to an antigenic mol. to elicit an immune response to the antigenic mol. in the vertebrate subject. Therapeutic methods, compns. and kits are also disclosed wherein the elicited immune response is utilized as a treatment for cancer and for infectious diseases.

L3 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:140550 CAPLUS
DOCUMENT NUMBER: 132:193249
TITLE: Therapeutic and prophylactic methods using heat shock proteins
INVENTOR(S): Srivastava, Pramod K.
PATENT ASSIGNEE(S): Fordham University, USA
SOURCE: U.S., 18 pp., Cont.-in-part of U.S. 5,935,576.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6030618	A	20000229	US 1996-711918	19960910
US 5935576	A	19990810	US 1995-527547	19950913
CA 2231998	A1	19970320	CA 1996-2231998	19960911
WO 9710000	A1	19970320	WO 1996-US14556	19960911
W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, FI, GE, HU, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA,				

UZ, VN
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9669734	A	19970401	AU 1996-69734		19960911
AU 727673	B2	20001221			
EP 851765	A1	19980708	EP 1996-930818		19960911
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
JP 11513369	T	19991116	JP 1996-512062		19960911
IN 1996MA01597	A	20050304	IN 1996-MA1597		19960912
ZA 9607758	A	19970320	ZA 1996-7758		19960913
US 6410028	B1	20020625	US 1999-372022		19990809
US 6447781	B1	20020910	US 2000-545352		20000407
US 6461615	B1	20021008	US 2000-545351		20000407
US 20030035808	A1	20030220	US 2002-265505		20021007
PRIORITY APPLN. INFO.:			US 1995-527547	A2	19950913
			US 1996-711918	A	19960910
			WO 1996-US14556	W	19960911
			US 1999-372022	A1	19990809
			US 2000-545351	A1	20000407

AB The present invention relates to immunogenic complexes of heat shock proteins (hsp) noncovalently bound to exogenous antigenic mols. which when administered to an individual elicit specific immunol. responses in the host. Methods of prevention and treatment of cancer and infectious disease are provided.

L3 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:117165 CAPLUS
DOCUMENT NUMBER: 132:175815
TITLE: Recombinant poliovirus for the treatment of cancer
INVENTOR(S): Gromeier, Matthias; Wimmer, Eckard
PATENT ASSIGNEE(S): The Research Foundation of State University of New York, USA
SOURCE: PCT Int. Appl., 99 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008166	A1	20000217	WO 1999-US7839	19990409
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6264940	B1	20010724	US 1998-129686	19980805
CA 2346123	A1	20000217	CA 1999-2346123	19990409
AU 9935523	A	20000228	AU 1999-35523	19990409
EP 1102851	A1	20010530	EP 1999-917388	19990409
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9903390	A	20010313	BR 1999-3390	19990805
US 6464972	B1	20021015	US 2000-566581	20000508

US 20030165466	A1	20030904	US 2002-175247		20020619
US 7147848	B2	20061212			
PRIORITY APPLN. INFO.:			US 1998-129686	A	19980805
			WO 1999-US7839	W	19990409
			US 2000-566581	A3	20000508

AB The present invention is directed to non-pathogenic, oncolytic, recombinant polioviruses for the treatment of various forms of malignant tumors. The recombinant polioviruses of the invention are those in which the internal ribosomal entry site (IRES) of the wild-type poliovirus was exchanged with the IRES of other picornaviruses, and optionally P1, P3 or the 3'NTR thereof was exchanged with that of poliovirus Sabin type. More particularly, the present invention is directed to the administration of the non-pathogenic, oncolytic, recombinant poliovirus to the tumor directly, intrathecally or i.v. to cause tumor necrosis. The method of the present invention is particularly useful for the treatment of malignant tumors in various organs, such as: breast, colon, bronchial passage, epithelial lining of the gastrointestinal, upper respiratory and genitourinary tracts, liver, prostate, and the brain. Astounding remissions in exptl. animals have been demonstrated for the treatment of malignant glioblastoma multiforme, an almost universally fatal neoplasm of the central nervous system.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:254287 CAPLUS
DOCUMENT NUMBER: 126:233701
ORIGINAL REFERENCE NO.: 126:45085a,45088a
TITLE: Therapeutic and prophylactic methods using heat shock protein-antigen complexes to elicit immune responses
INVENTOR(S): Srivastava, Pramod K.
PATENT ASSIGNEE(S): Fordham University, USA
SOURCE: PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9710000	A1	19970320	WO 1996-US14556	19960911
W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, FI, GE, HU, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, UZ, VN				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5935576	A	19990810	US 1995-527547	19950913
US 6030618	A	20000229	US 1996-711918	19960910
CA 2231998	A1	19970320	CA 1996-2231998	19960911
AU 9669734	A	19970401	AU 1996-69734	19960911
AU 727673	B2	20001221		
EP 851765	A1	19980708	EP 1996-930818	19960911
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 11513369	T	19991116	JP 1996-512062	19960911
US 6447781	B1	20020910	US 2000-545352	20000407
US 6461615	B1	20021008	US 2000-545351	20000407
US 20030035808	A1	20030220	US 2002-265505	20021007

PRIORITY APPLN. INFO.: US 1995-527547 A 19950913
US 1996-711918 A 19960910
WO 1996-US14556 W 19960911
US 1999-372022 A1 19990809
US 2000-545351 A1 20000407

AB Immunogenic complexes of heat shock proteins (hsp) noncovalently bound to exogenous antigenic mols. are disclosed which, when administered to an individual, elicit specific immunol. responses in the host. Methods and compns. for prevention and treatment of cancer and infectious disease are provided. An hsp70-ovalbumin complex induced a far greater cytotoxic T-lymphocyte response than either hsp70 alone or ovalbumin alone.

=> D L7 IBIB ABS 1-20

L7 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2008:462580 CAPLUS
DOCUMENT NUMBER: 149:71267
TITLE: Widespread recombination within human parechoviruses: analysis of temporal dynamics and constraints
AUTHOR(S): Benschop, K. S. M.; Williams, C. H.; Wolthers, K. C.; Stanway, G.; Simmonds, P.
CORPORATE SOURCE: Department of Medical Microbiology, Laboratory of Clinical Virology, Academic Medical Center, Amsterdam, Neth.
SOURCE: Journal of General Virology (2008), 89(4), 1030-1035
CODEN: JGVIAY; ISSN: 0022-1317
PUBLISHER: Society for General Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Human parechoviruses (HPeVs), members of the family Picornaviridae, are classified into six types. To investigate the dynamics and likelihood of recombination among HPeVs, we compared phylogenies of two distant regions (VP1 and 3Dpol) of 37 HPeV isolates (types 1 and 3-5) and prototype sequences (types 1-6). Evidence for frequent recombination between HPeV1, 4, 5 and 6 was found. The likelihood of recombination was correlated with the degree of VP1 divergence and differences in isolation dates, both indicative of evolutionary times of divergence. These temporal dynamics were found to be most similar to those of human enterovirus species B variants. In contrast, HPeV3 remained phylogenetically distinct from other types throughout the genome. As HPeV3 is equally divergent in nucleotide sequence from the other HPeV types, its genetic isolation may reflect different biol. and changed cellular tropisms, arising from the deletion of the RGD motif, and likely use of a non-integrin receptor.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:1348907 CAPLUS
DOCUMENT NUMBER: 144:83621
TITLE: Kit and method for detection of microbial agents and of antibodies to microbial agents using integrin $\alpha v\beta 6$
INVENTOR(S): Ferris, Nigel; King, Donald; Jackson, Terry; Paton, David
PATENT ASSIGNEE(S): Institute for Animal Health, UK
SOURCE: Brit. UK Pat. Appl., 163 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2415504	A	20051228	GB 2004-14024	20040623
WO 2006000740	A2	20060105	WO 2005-GB1952	20050520
WO 2006000740	A3	20060302		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

EP 1929303	A2	20080611	EP 2005-748354	20050520

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR

PRIORITY APPLN. INFO.:

GB 2004-14024	A	20040623
WO 2005-GB1952	W	20050520

AB The invention provides a method for determining whether a sample contains a target microbial agent comprising contacting the sample with an αvβ6 integrin under conditions that allow the target microbial agent, if present in the sample, to bind to the integrin; and determining whether the integrin has any target microbial agent bound thereto. The invention also provides a method for determining whether a sample contains antibodies to a target microbial agent. Preferably, the target microbial agent is foot-and-mouth disease virus (FMDV). Further aspects of the invention comprise kits, polypeptides, polynucleotides, vectors and hosts cells for use in the methods of the invention. An ELISA, using recombinant αvβ6 as trapper and guinea pig antibody and rabbit anti-guinea pig antibody-horseradish peroxidase conjugate as detector, bound and detected all seven FMDV serotypes tested but did not react with swine vesicular disease virus. Totally FMDV type-specific reactions resulted from an ELISA employing recombinant αvβ6 as capture and monoclonal antibodies as detection reagents.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:520380 CAPLUS
DOCUMENT NUMBER: 144:2933
TITLE: Molecular analysis of human parechovirus 1 binding to cells and integrins
AUTHOR(S): Ghazi, F.; Stanway, G.; Dabirmanesh, B.
CORPORATE SOURCE: Department of Biological Sciences, John Tabor Laboratories, University of Essex, Colchester, CO4 3SQ, UK
SOURCE: Majmoa-i Maghalat-i Sevomin Hemayesh Maliy Biotechnology Jomhoriy-i Islame-i Iran, Mashhad, Islamic Republic of Iran, Sept. 9-11, 2003 (2003), Volume 3, 38-41. Danishgah-i Ferdowsi Mashhad: Mashhad, Iran.
CODEN: 69GXPF; ISBN: 964-386-023-X
DOCUMENT TYPE: Conference

LANGUAGE: English
AB The human parechovirus 1 RGD motif in VP1 was studied by site-directed mutagenesis. An RGD-to-RGE change gave only revertant viruses with a restored RGD, while deletion of GD was lethal and nonrevertable. Mutations at the +1 and +2 positions had some effect on growth properties and a +1 M-to-P change was lethal. These studies indicate that the RGD motif plays a critical role in infectivity, presumably by interacting with integrins, and that downstream amino acids can have an influence on function.
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:247154 CAPLUS
DOCUMENT NUMBER: 139:49742
TITLE: Molecular and biological analysis of echovirus 9 strain isolated from a diabetic child
AUTHOR(S): Paananen, Anja; Ylipaasto, Petri; Rieder, Elizabeth; Hovi, Tapani; Galama, Jochem; Roivainen, Merja
CORPORATE SOURCE: Enterovirus Laboratory, National Public Health Institute (KTL), Helsinki, Finland
SOURCE: Journal of Medical Virology (2003), 69(4), 529-537
CODEN: JMVIDB; ISSN: 0146-6615
PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The full-length infectious cDNA clone was constructed and sequenced from the strain DM of echovirus 9, which was recently isolated from a 6-wk-old child at the clin. onset of type 1 diabetes. Parallel with the isolate DM, the full-length infectious cDNA clone of the prototype strain echovirus 9 Barty (Barty-INF), was constructed and sequenced. Genetic relationships of the sequenced echo 9 viruses to the other members of the human enterovirus type B species were studied by phylogenetic analyses. Comparison of capsid protein sequences showed that the isolate DM was closely related to both prototype strains: Hill and Barty-INF. The only exception was the inner capsid protein VP4 where serotype specificity was not evident and the isolate DM clustered with the strain Hill and the strain Barty-INF with echovirus 30 Bastianni. Likewise, the nonstructural protein coding region, P2P3, of isolate DM was more similar to strain Hill than to strain Barty-INF. However, like echovirus 9 Barty, the isolate DM contained the RGD-motif in the carboxy terminus of capsid protein VP1. By blocking expts. using an RGD -containing peptide and a polyclonal rabbit antiserum to the αvβ3-integrin, it was shown that this mol. works as a cellular receptor for isolate DM. By using primary human islets, it was shown that the isolate DM is capable of infecting insulin-producing β-cells like the corresponding prototype strains did. However, only isolate DM was clearly cytolytic for β-cells. The infectious clones that were made allow further investigations of the mol. features responsible for the diabetogenicity of the isolate DM.
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:866263 CAPLUS
DOCUMENT NUMBER: 136:147551
TITLE: Molecular evolution of human echovirus 9 isolated from patients with aseptic meningitis in northern Kyushu during the summer of 1997
AUTHOR(S): Hara, Koyu; Kashiwagi, Takahito; Ohtsu, Yasushi; Masunaga, Kenji; Akasu-Tsuji, Yuko; Tsumura, Naoki;

Kato, Hirohisa; Iwahashi, Jun; Hamada, Nobuyuki; Toyoda, Michiko; Toyoda, Tetsuya
CORPORATE SOURCE: Department of Virology, Kurume University School of Medicine, Fukuoka, 830-0011, Japan
SOURCE: Microbiology and Immunology (2001), 45(10), 717-720 CODEN: MIIMDV; ISSN: 0385-5600
PUBLISHER: Center for Academic Publications Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An epidemic of aseptic meningitis caused by human echovirus 9 (E-9) occurred in the summer of 1997 in northern Kyushu, Japan. Sequences of genome position 2504-3358, which encoded a part of VP1, of the nine isolated viruses were determined An RGD motif and B-C loop were found in all. They were almost identical and closely related to the virulent strain Barty.
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:725383 CAPLUS
DOCUMENT NUMBER: 136:2846
TITLE: Arginine-glycine-aspartic acid motif is critical for Human parechovirus 1 entry
AUTHOR(S): Boonyakiat, Yingmanee; Hughes, Pamela J.; Ghazi, Farideh; Stanway, Glyn
CORPORATE SOURCE: Department of Biological Sciences, John Tabor Laboratories, University of Essex, Colchester, CO4 3SQ, UK
SOURCE: Journal of Virology (2001), 75(20), 10000-10004 CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The human parechovirus 1 RGD motif in VP1 was studied by mutagenesis. An RGD-to-RGE change gave only revertant viruses with a restored RGD, while deletion of GD was lethal and nonrevertable. Mutations at the +1 and +2 positions had some effect on growth properties and a +1 M-to-P change was lethal. These studies indicate that the RGD motif plays a critical role in infectivity, presumably by interacting with integrins, and that downstream amino acids can have an influence on function.
REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:469194 CAPLUS
DOCUMENT NUMBER: 133:175874
TITLE: Antigenic properties of human parechovirus 1
AUTHOR(S): Joki-Korpela, Paivi; Roivainen, Merja; Lankinen, Hilkka; Poyry, Tuija; Hyypia, Timo
CORPORATE SOURCE: Haartman Institute, Department of Virology, University of Helsinki, Helsinki, FIN-00014, Finland
SOURCE: Journal of General Virology (2000), 81(7), 1709-1718 CODEN: JGVIAY; ISSN: 0022-1317
PUBLISHER: Society for General Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Human parechoviruses 1 and 2 (HPEV1 and HPEV2, resp.), formerly known as echoviruses 22 and 23, have been assigned to a novel picornavirus genus on the basis of their distinct mol. and biol. properties. To study the immunol. characteristics of HPEV1 capsid proteins, antigenic anal. was

carried out by a peptide scanning technique, which can be used to identify the immunogenic peptide sequences of a protein. Partially overlapping peptides, representing the capsid of HPEV1, were synthesized using a 12 aa window in a three residue shift and reactivity of rabbit and murine HPEV1 antisera against these peptides were tested. Using this method, an antigenic site in the VP0 polypeptide, recognized by both rabbit and murine antisera, was identified. The sequence of this region was conserved among HPEV1 clin. isolates obtained from Finland and the United States. Antiserum against this peptide region showed neutralizing activity against HPEV1 in cell culture. Because the C-terminal region of HPEV1 VP1 contains a functional RGD motif, the antigenicity of this region was also tested. By using the corresponding peptide antiserum, neutralization of HPEV1 was observed Cross-neutralization between HPEV1 and coxsackievirus A9, an enterovirus with a similar RGD motif in VP1, was also detected.

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:423166 CAPLUS

DOCUMENT NUMBER: 133:175510

TITLE: Human parechovirus 1 utilizes integrins αvβ3 and αvβ1 as receptors

AUTHOR(S): Triantafilou, Kathy; Triantafilou, Martha; Takada, Yoshikazu; Fernandez, Nelson

CORPORATE SOURCE: Department of Biological Sciences, University of Essex, Essex, C04 3SQ, UK

SOURCE: Journal of Virology (2000), 74(13), 5856-5862 CODEN: JOVIAM; ISSN: 0022-538X

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Human parechovirus 1 (HPEV1) displays an arginine-glycine-aspartic acid (RGD) motif in the VP1 capsid protein, suggesting integrins as candidate receptors for HPEV1. A panel of monoclonal antibodies (MAbs) specific for integrins αvβ3, αvβ1, and αvβ5, which have the ability to recognize the RGD motif, and also a MAb specific for integrin α2β1, an integrin that does not recognize the RGD motif, were tested on A549 cells. Our results showed that integrin αv-specific MAb reduced infectivity by 85%. To specify which αv integrins the virus utilizes, we tested MAbs specific to integrins αvβ3 and αvβ1 which reduced infectivity significantly, while a MAb specific for integrin αvβ5, as well as the MAb specific for α2β1, showed no reduction When a combination of MAbs specific for integrins αvβ3 and αvβ1 were used, virus infectivity was almost completely inhibited; this shows that integrins αvβ3 and αvβ1 are utilized by the virus. We therefore proceeded to test whether αv integrins' natural ligands fibronectin and vitronectin had an effect on HPEV1 infectivity. We found that vitronectin reduced significantly HPEV1 infectivity, whereas a combination of vitronectin and fibronectin abolished infection. To verify the use of integrins αvβ3 and αvβ1 as HPEV1 receptors, CHO cells transfected and expressing either integrin αvβ3 or integrin αvβ1 were used. It was shown that the virus could successfully infect these cells. However, in immunopptn. expts. using HPEV1 virions and allowing the virus to bind to solubilized A549 cell extract, we isolated and confirmed by Western blotting the αvβ3 heterodimer. In conclusion, we found that HPEV1 utilizes both integrin αvβ3 and αvβ1 as receptors; however, in cells that express both integrins, HPEV1 may preferentially bind integrin

αvβ3.
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:594435 CAPLUS
DOCUMENT NUMBER: 131:298196
TITLE: Integrin αvβ3 (vitronectin receptor) is a candidate receptor for the virulent echovirus 9 strain Barty
AUTHOR(S): Nelsen-Salz, Birgit; Eggers, Hans J.; Zimmermann, Holger
CORPORATE SOURCE: Institut fur Virologie der Universitat zu Koln, Koln, 50935, Germany
SOURCE: Journal of General Virology (1999), 80(9), 2311-2313
CODEN: JGVIAY; ISSN: 0022-1317
PUBLISHER: Society for General Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The enterovirus echovirus 9 strain Barty (E9/Barty) is pathogenic for newborn mice as well as for humans. In contrast to the apathogenic prototype strain Hill, strain Barty encodes an RGD motif in the C-terminal part of the structural protein VP1. Data are presented that show that E9/Barty binds its target cells via contact of the RGD motif to the αvβ3 integrin (vitronectin receptor), whereas prototype Hill uses a different, still unidentified receptor site. Furthermore, virus titers of murine muscle tissue were compared after infection of newborn and 1-, 2-, 3- and 12-wk-old mice. The replication capacity of the virus decreased dramatically with age of the infected mice. Since E9/Barty does not replicate or replicates only poorly in mice older than about 5 days, and expression of the vitronectin receptor is reported to be down-regulated in striated muscle tissue during development, it is suggested that susceptibility of mice to this echovirus infection is controlled by the availability of αvβ3 integrin.
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:491413 CAPLUS
DOCUMENT NUMBER: 131:226967
TITLE: Determinants of pathogenicity of echovirus 9 in men. Significance of a functional RGD -motif
AUTHOR(S): Nelsen-Salz, Birgit; Schildgen, Oliver; Klein, Marcus; Hadaschik, Dirk; Eggers, Hans J.; Zimmermann, Holger
CORPORATE SOURCE: Inst. Virologie, Univ. Koln, Cologne, D-50935, Germany
SOURCE: Zentralblatt fuer Bakteriologie (1999), 289(3), 347-354
CODEN: ZEBAE8; ISSN: 0934-8840
PUBLISHER: Urban & Fischer Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Nine independent echovirus 9 isolates obtained from sick children in 1995 were studied. It was discovered that these isolates differed, in respect to their pathogenicity for newborn mice indicating that the degree of human pathogenicity of an echovirus 9 variant does not necessarily correlate with mouse pathogenicity. Nevertheless, all virus variants were found to code for an RGD-motif within their VP1 protein. Hence, the RGD-motif and its highly conserved flanking regions are the conditio sine qua non, but, as

expected, not sufficient for the mouse-pathogenic character.
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:103526 CAPLUS
DOCUMENT NUMBER: 130:278135
TITLE: A peptide inhibiting the collagen binding function of integrin α2I domain
AUTHOR(S): Ivaska, Johanna; Kapyla, Jarmo; Pentikainen, Olli; Hoffren, Anna-Marja; Hermonen, Jorma; Huttunen, Pasi; Johnson, Mark S.; Heino, Jyrki
CORPORATE SOURCE: MediCity Research Laboratory and the Department of Medical Biochemistry, University of Turku, Finland
SOURCE: Journal of Biological Chemistry (1999), 274(6), 3513-3521
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Integrin α2 subunit forms in the complex with the β1 subunit a cell surface receptor binding extracellular matrix mols., such as collagens and laminin-1. It is a receptor for echovirus-1, as well. Ligands are recognized by the special "inserted" domain (I domain) in the integrin α2 subunit. Venom from a pit viper, Bothrops jararaca, has been shown to inhibit the interaction of platelet α2β1 integrin with collagen because of the action of a disintegrin/metalloproteinase named jararhagin. The finding that crude B. jararaca venom could prevent the binding of human recombinant rα2I domain to type I collagen led us to study jararhagin further. Synthetic peptides representing hydrophilic and charged sequences of jararhagin, including the RSECD sequence replacing the well known RGD motif in the disintegrin-like domain, were synthesized. Although the disintegrin-like domain derived peptides failed to inhibit rα2I domain binding to collagen, a basic peptide from the metalloproteinase domain proved to be functional. In an in vitro assay, the cyclic peptide, CTRKKHDNAQC, was shown to bind strongly to human recombinant α2I domain and to prevent its binding to type I and IV collagens and to laminin-1. Mutational anal. indicated that a sequence of three amino acids, arginine-lysine-lysine (RKK), is essential for rα2I domain binding, whereas the mutation of the other amino acids in the peptide had little if any effect on its binding function. Importantly, the peptide was functional only in the cyclic conformation and its affinity was strictly dependent on the size of the cysteine-constrained loop. Furthermore, the peptide could not bind to α2I domain in the absence of Mg2+, suggesting that the conformation of the I domain was critical, as well. Cells could attach to the peptide only if they expressed α2β1 integrin, and the attachment was inhibited by anti-integrin antibodies.
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:698935 CAPLUS
DOCUMENT NUMBER: 130:61735
TITLE: Molecular analysis of human parechovirus type 2 (formerly echovirus 23)
AUTHOR(S): Ghazi, Farideh; Hughes, Pamela J.; Hyypia, Timo; Stanway, Glyn
CORPORATE SOURCE: Department of Biological Sciences, John Tabor

Laboratories, University of Essex, Colchester, CO4 3SQ, UK
SOURCE: Journal of General Virology (1998), 79(11), 2641-2650
CODEN: JGVIAY; ISSN: 0022-1317
PUBLISHER: Society for General Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Picornaviruses have been divided into five genera until recently, when a sixth genus, Parechovirus, was defined. Human parechovirus type 1 (HPeV1; formerly echovirus 22) was the first recognized member of this genus and preliminary sequence anal. of echovirus 23 [now renamed human parechovirus type 2 (HPeV2)] suggested that it is also a parechovirus. Here we describe the complete nucleotide and predicted amino acid sequences of HPeV2, which indicate a close relationship to HPeV1 throughout the genome. Sequence covariance in the 5' untranslated region allows a prediction of the secondary structure, which indicates that these parechoviruses have a type 2 internal ribosome entry site, most closely related to that of cardioviruses. Overall, HPeV2 has 87.9% amino acid identity with HPeV1, most divergence being seen in regions of the capsid proteins that probably define antigenic sites. The N-terminal sequence extension to VP3, seen only in parechoviruses, is highly basic in both viruses, but has a variable sequence, suggesting that it does not have a sequence-specific role. There is an RGD motif near the C terminus of VP1, in an analogous location to that in HPeV1 which is believed to be functionally significant. The results confirm that both viruses are parechoviruses and give insights into the mol. features of this genus.
REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:462829 CAPLUS
DOCUMENT NUMBER: 129:226345
ORIGINAL REFERENCE NO.: 129:45901a,45904a
TITLE: Molecular biological characterization of enterovirus variant isolated from patients with aseptic meningitis
AUTHOR(S): Jung, Yong-Tae; Kim, Gum-Ryong; Paik, Soon-Young
CORPORATE SOURCE: Department of Microbiology, College of Medicine, The Catholic University of Korea, Seoul, 137-701, S. Korea
SOURCE: Experimental and Molecular Medicine (1998), 30(2), 101-107
CODEN: EMMEF3; ISSN: 1226-3613
PUBLISHER: Korean Society of Medical Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In Korea, there was a big outbreak of aseptic meningitis in 1993. Six clin. isolates of enterovirus were obtained from patients with aseptic meningitis and were identified as echovirus type 9 by serotyping with a pool of neutralizing antisera. For mol. characterization of the isolates, the nucleotide sequences of 5'-noncoding region (NCR), VP4, VP2, VP1, 2A and 2C regions of the isolates were compared with the corresponding regions of echovirus type 9 Hill and Barty strains. Unlike Hill strain, Barty strain contained a C-terminal extension to the capsid protein VP1 with an RGD (arginine-glycine-aspartic acid) motif. To determine whether similar structural features were present in our isolates, their nucleotide sequences including the VP1 region were analyzed. All isolates exhibited the VP1 extension with the RGD motif. We concluded the Korean isolates in the year of 1993 as the echovirus type 9 Barty strain although the isolates showed 15-20% nucleotide sequence differences

in the several genomic regions.
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:61407 CAPLUS
DOCUMENT NUMBER: 128:190249
ORIGINAL REFERENCE NO.: 128:37509a,37512a
TITLE: Antigenic sites of coxsackievirus A9
AUTHOR(S): Pulli, Timo; Lankinen, Hikka; Roivainen, Merja; Hyypia, Timo
CORPORATE SOURCE: Enterovirus Laboratory, National Public Health Institute, Helsinki, FIN-00300, Finland
SOURCE: Virology (1998), 240(2), 202-212
CODEN: VIRLAX; ISSN: 0042-6822
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Antigenic anal. of coxsackievirus A9 (CAV9) was carried out by using a peptide scanning method. Immunogenic regions in the capsid proteins VP1, VP2, and VP3 were recognized by antibodies in the sera of virus-immunized rabbits. The peptide sequences were scanned using a 12-amino-acid window and three-residue shift. Three immunogenic regions, located in the N- and C-terminal parts of VP1 and in the N-terminus of VP3, were identified. Trypsin treatment of the virus, known to cleave off the C-terminus of VP1 containing a functional RGD motif, completely abolished the reactivity against this region but did not have any other significant effect on antigenicity. In further studies, it was found that the RGD motif itself was poorly immunogenic whereas antibody-binding sites were located at both sides of the motif. New antigenic sites emerged after heat treatment of CAV9 at 56 or 100° prior to immunization; in particular, loop structures between β strands in VP2 exhibited increased immunogenicity. New antigenic sites in VP1 and VP3 also appeared after the treatments. In spite of the markedly altered reactivity in peptide scanning, the virus treated at 56° elicited high titers of neutralizing antibodies. To reveal cross-reactive antigenic sites, antisera raised against coxsackievirus B3 and echovirus 11 were also tested. The cross-reactive antigenic sites were located mainly in the N-terminal parts of VP1 and VP3.
REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:567055 CAPLUS
DOCUMENT NUMBER: 127:245411
ORIGINAL REFERENCE NO.: 127:47867a,47870a
TITLE: Cell-surface interactions of echovirus 22
AUTHOR(S): Pulli, Timo; Koivunen, Erkki; Hyypia, Timo
CORPORATE SOURCE: National Public Health Institute, Helsinki, FIN-00300, Finland
SOURCE: Journal of Biological Chemistry (1997), 272(34), 21176-21180
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Echovirus 22 (EV22) is a picornavirus forming a distinct mol. cluster together with echovirus 23. EV22 has an Arg-Gly-Asp (RGD) peptide motif in its capsid protein VP1; similar motifs are known to mediate many cell-cell and microbe-host interactions. To

identify peptide sequences that specifically bind to EV22 and potentially play a role in receptor recognition, the authors have used here peptide libraries displayed in filamentous phage. They isolated an EV22-binding motif CLRSG(R/F)GC. The synthetic CLRSGRGC peptide was able to inhibit EV22 infection. The infection was also inhibited by an RGD -containing peptide representing the C terminus of the EV22 capsid protein VP1 and CWDDGWLC (an RGD-binding peptide). As the EV22-recognizing sequence LRSG is found in the integrin β1 chain and the entire LRSGRG hexapeptide occurs in the matrix metalloproteinase 9 (MMP-9), the authors carried out blocking expts. with anti-integrin and anti-MMP-9 antibodies. EV22 infection could be blocked in cell cultures with anti-αv, -β1, and, to a lesser extent, with anti-MMP-9 antibodies. These results imply that EV22 recognizes preferentially αvβ1-integrin as a cellular receptor and MMP-9 may also play a role in the cell-surface interactions of the virus.

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ACCESSION NUMBER: 1997:432040 CAPLUS
DOCUMENT NUMBER: 127:147785
ORIGINAL REFERENCE NO.: 127:28517a
TITLE: Cell attachment and mouse virulence of echovirus 9 correlate with an RGD motif in the capsid protein VP1
AUTHOR(S): Zimmermann, Holger; Eggers, Hans J.; Nelsen-Salz, Birgit
CORPORATE SOURCE: Institut fur Virologie der Universitat zu Koln, Cologne, 50935, Germany
SOURCE: Virology (1997), 233(1), 149-156
CODEN: VIRLAX; ISSN: 0042-6822
PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The recently analyzed sequences of the nonpathogenic prototype strain Hill and the mouse-virulent strain Barty of the human echovirus 9 differ particularly in an insertion coding for an RGD motif at the C-terminus of the capsid protein VP1 in the genome of strain Barty. To investigate mol. determinants of virulence, the authors generated a panel of recombinant viruses derived from cDNA clones of strains Hill and Barty. In this communication, the authors show that the mouse-pathogenic character of strain Barty correlates with a 310-aa segment including the RGD motif. By mutating the RGD to an RGE tripeptide, the infectivity of the resulting echovirus 9 clones for GMK cells is lost. Furthermore, the authors could show that synthetic peptides containing the RGD sequence influence binding of mouse-virulent echovirus 9 strains to GMK cells, whereas binding of apathogenic strains is not affected. These results suggest that the RGD motif is a significant factor affecting pathogenicity of echovirus 9 strains.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ACCESSION NUMBER: 1996:536153 CAPLUS
DOCUMENT NUMBER: 125:213768
ORIGINAL REFERENCE NO.: 125:39787a,39790a
TITLE: Molecular cloning and sequence determination of the complete genome of the virulent echovirus 9 strain Barty
AUTHOR(S): Zimmermann, Holger; Eggers, Hans J.; Nelsen-Salz,

Birgit
CORPORATE SOURCE: Inst. Virologie, Univ. zu Koeln, Cologne, Germany
SOURCE: Virus Genes (1996), 12(2), 149-154
CODEN: VIGEET; ISSN: 0920-8569
PUBLISHER: Kluwer
DOCUMENT TYPE: Journal
LANGUAGE: English
AB As part of a study of the mol. basis of pathogenicity of echovirus 9, the complete nucleotide sequence of the mouse-virulent echovirus 9 strain Barty was determined Excluding the poly(A) tail, the complete RNA genome is composed of 7451 bases. The postulated open reading frame extends from nucleotide (nt) 741 to 7349 and predicts a polyprotein of 2203 amino acids (aa). As compared with the sequence of the echovirus 9 prototype strain Hill, which is a-pathogenic for newborn mice, 1492 nt are exchanged, leading to 9% divergence of the deduced amino acid sequence. The foremost difference between both strains is located at the C-terminus of the capsid protein VP1. In the case of strain Barty, an addnl. 10 aa fragment, including an RGD motif, is inserted.

L7 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:383724 CAPLUS
DOCUMENT NUMBER: 123:26846
ORIGINAL REFERENCE NO.: 123:4821a,4824a
TITLE: The genome of echo-virus 11
AUTHOR(S): Dahllund, Leif; Nissinen, Liisa; Pulli, Timo; Hyttinen, Veli-Pekka; Stanway, Glyn; Hyypiae, Timo
CORPORATE SOURCE: Department of Virology and MediCity Research Laboratory, University of Turku, Turku, FIN-20520, Finland
SOURCE: Virus Research (1995), 35(2), 215-22
CODEN: VIREDF; ISSN: 0168-1702
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Echoviruses are the largest enterovirus subgroup consisting of 32 serotypes. They are common human pathogens causing, for example, meningitis, encephalitis and exanthema, but in spite of their clin. importance, relatively little is known about their biol. To illuminate the mol. characteristics of echo-viruses, we have completed the genomic sequence of serotype 11. The RNA genome is 7438 nucleotides in length and it codes for a 2195 amino acid long polyprotein. When compared to other sequenced enteroviruses, echo-virus 11 (EV11) shows remarkable similarity with coxsackie B viruses (CBVs) and coxsackievirus A9 (CAV9). On the basis of amino acid sequence homol. in the capsid region, CAV9 is the virus most closely related to EV11. These two viruses have an apparent insertion sequence located at the C-terminus of the VP1 polypeptide. EV11, however, lacks the RGD motif found in the corresponding region of CAV9. The organization of the 5' end noncoding region resembles that of other enteroviruses, but contains a 12 nucleotides long poly-U stretch not seen in any other enterovirus sequenced to date.

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ACCESSION NUMBER: 1995:218633 CAPLUS
DOCUMENT NUMBER: 122:50841
ORIGINAL REFERENCE NO.: 122:9717a,9720a
TITLE: Molecular and biological characteristics of echovirus 22, a representative of a new picornavirus group
AUTHOR(S): Stanway, Glyn; Kalkkinen, Nisse; Roivainen, Merja; Ghazi, Farideh; Khan, Mahboob; Smyth, Michael;

Meurman, Olli; Hyypia, Timo
CORPORATE SOURCE: Department Virology, University Turku, Turku, SF-20520, Finland
SOURCE: Journal of Virology (1994), 68(12), 8232-8
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Recent sequence anal. revealed that the human pathogen echovirus 22 (EV22) is genetically distant from all the other picornaviruses studied to data (T. Hyypiae, C. Horsnell, M. Maaronen, M. Khan, N. Kalkkinen, P. Auvinen, L. Kinnunen, and G. Stanway, Proc. Natl. Acad. Sci. USA 89:8847-8851, 1992). We have further characterized the biol. properties of the virus and show here that the virion has properties similar to those of other picornaviruses. However, the protein composition is unique, in that most copies of one of the three major capsid proteins, VP0, do not undergo the further processing to VP2 and VP4 observed during the maturation of the virus in previously studied picornaviruses. Alignment of the capsid protein sequences with those of other picornaviruses revealed, furthermore, that the VP3 polypeptide contains an apparent insertion of approx. 25 amino acids at its amino terminus. An arginine-glycine-aspartic acid (RGD) motif is found in VP1, and by using synthetic peptides, it was shown that this sequence plays a role in cell surface receptor recognition. Finally, EV23 was shown to share remarkable identity with EV22 in certain parts of the genome and also belongs to this previously unrecognized picornavirus group.

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ACCESSION NUMBER: 1994:531288 CAPLUS
DOCUMENT NUMBER: 121:131288
ORIGINAL REFERENCE NO.: 121:23685a,23688a
TITLE: Entry of coxsackievirus A9 into host cells: specific interactions with αvβ3 integrin, the vitronectin receptor
AUTHOR(S): Roivainen, Merja; Piirainen, Liisa; Hovi, Tapani; Virtanen, Ismo; Riikonen, Terhi; Heino, Jyrki; Hyypiae, Timo
CORPORATE SOURCE: Enterovirus Laboratory, National Public Health Institute, Helsinki, FIN-00300, Finland
SOURCE: Virology (1994), 203(2), 357-65
CODEN: VIRLAX; ISSN: 0042-6822
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Attachment and entry of coxsackievirus A9 (CAV-9) to GMK cells were previously shown to be dependent on an arginine-glycine-aspartic acid (RGD) motif in the capsid protein VP1, suggesting integrins as candidate receptors for the virus. The authors have pursued the matter further and show that antibodies specific for the αv and/or β3 integrin subunits protect GMK cells from CAV-9 infection. Affinity purification of radioiodinated cell surface proteins using CAV-9 or virus-specific peptide (RRRGDL) columns confirmed that the αvβ3 heterodimer, known as the vitronectin receptor, is recognized by the virus in GMK cells. Other proteins, of lower mol. weight (less than 40 kDa), were also bound to and specifically eluted from the columns, but their possible role in attachment and entry of CAV-9 remains to be elucidated by further studies. Of several other related viruses studied, only echovirus 22, which also has an RGD motif in the VP1 capsid protein, was found to compete for cell surface binding with CAV-9.